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IMPACT OF REGIME TYPE ON ARGENTINEAN
CENTRAL GOVERNMENT BUDGETARY PRIORITIES 1961-82:
A TEST OF THE O'DONNELL THESIS

Robert E. Looney

Professor, National Security Affairs

Naval Postgraduate School

Monterey, California 93943

ABSTRACT

A large body of literature on Argentina suggests that transitions from military to civilian regimes bring about fundamental changes in policy-making in general and in economic, social, and military priorities in particular. This view has been developed by O'Donnell in his path breaking thesis about the emergence of new forms of authoritarianism in Latin America. According to O'Donnell each successive government is an alliance of various distinct interest groups. Each alliance is imbued with a distinct sense of what should be done and at whose expense and translates the goals and interests of the members of the coalition into public policies.

The purpose of this paper is to test the O'Donnell thesis i.e., to determine the possible existence and nature of structural changes in the government's budgetary priorities associated with regime change. The empirical results yield considerable support to the general thesis that regime type in Argentina has a major impact on the amount and relative share of resources allocated to defense and socioeconomic activities.

INTRODUCTION

A sharp change in general economic policies appears to be taking place in Argentina following the demise of the 1976-83 military regime and the restoration of democracy. The changes are apparently not merely ideological--a shift from neo-liberal macro-economic policies to more conventional Keynesian type policies--but also involve budgetary priorities with a shift in emphasis away from military and military related expenditures, towards social and welfare-related allocations. Clearly implied in this shift is the presumption that civilian regimes in Argentina tend to pursue markedly different economic policies than their military counterparts.

The purpose of this paper is to examine by means of statical analysis, the patterns of budgetary allocations associated with regime type in Argentina over the period 1961-82[1]. The main thrust of the analysis is to determine the possible existence and nature of structural changes in the government's budgetary priorities associated with regime change.

THE O'DONNELL THESIS

A wide body of literature on Argentina suggests that transitions from military to civilian regimes bring about fundamental changes in policy-making in general and economic-social priorities in particular. This view has been developed by O'Donnell[2] in his path breaking thesis about the emergence of new forms of authoritarianism in Latin America. According to O'Donnell, particular types of economic and social crisis tend to

1. be associated with each phase of modernization.
2. bring a new dominant coalition to power and produce a distinct type of authoritarian rule.

Each alliance comes to power imbued with a distinct sense of what should be done at whose expense, consolidates its control, centralizes power and authority, seals off the arena to non-coalition members, exercises unconstrained control over the policy process and translates the goals and interests of the members of the coalition into public policies. Coalition members benefit from public policies; non-coalition members bear the costs. Authoritarianism in general and populist and bureaucratic authoritarianism in particular are seen as the response which different sets of elites take in reaction to crises engendered by different phases of modernization[3].

A causal relationship exists among economic stages, politics and public policies; the "elective affinity" is close. As a consequence, questions of possible conflicts between economics and politics, or between politics and policies never arise. Indeed, different types of authoritarianism are defined jointly on the basis of certain economic stages, coalitions and public policies[4].

The bureaucratic-authoritarian model as applied by O'Donnell has the following characteristics[5]:

1. Economic State: capital/durable consumer goods, import substitution industrialization;
2. Coalition: segments of the military, large and efficient domestic industrialists, foreign capital, technocrats in public sector;
3. Policies:
 - a) promotion of capital (basic) / durable consumer goods industries and modernization of their infrastructure;
 - b) conservative budgetary and restrictive monetary policies combined with efforts to increase tax revenues;
 - c) decreases in overall public spending;
 - d) decreases in public employment;
 - e) efforts to impose a rational calculus on policy-making;
 - f) efforts to stop or regress political redistribution of wealth to the popular

sector. Redistribution is seen as detrimental to the provision of sufficient investment capital;

- g) decreases in social welfare benefits;
- h) efforts to demobilize and exclude the popular sectors both economically and politically, and
- i) increases in military spending to control actual or expected social unrest and threats to domestic security.

The critical variable identified by O'Donnell as conditioning the development of bureaucratic-authoritarianism is the level of perceived threat to the existing socioeconomic order generated by the pre-coup crisis[6]. The level of prior threat not only represents originating circumstance; in O'Donnell's view, it shapes subsequent features of the bureaucratic-authoritarian state and accounts for differences among cases. The economic and political crises that precede the bureaucratic-authoritarian administration have variations from one case to another that have repercussions on the specific characteristics of the government that results[7].

Of interest here is that O'Donnell also argues that threat levels explain variations in economic policies and economic performance. The short-term consequences of a higher threat level specifically include[8]:

1. more careful adherence to orthodox economic policies;
2. more immediate inflows of external public assistance to help stabilize the economy;
3. more difficulty in reducing the rate of inflation to acceptable levels;
4. less capacity of the state to invest;
5. less probability of rapidly restoring economic growth;
6. slower restoration of investor confidence, and
7. by implication, less immediate success in attracting long-term private investment.

Clearly, the 1966 Argentine military regime was a low threat bureaucratic-authoritarian case, while the 1976 regime was a high-threat example.

O'Donnell has observed that the economic policies of the military incorporate fundamental components. Disinflation through fiscal-monetary orthodoxy is used, in part, to break the political mobilization of labor unions through the creation of additional slack in labor markets. Disinflation is also necessitated by the second characteristic of economic policy under military authoritarianism, a trend toward transnationalization of the production structure, particularly heavy industry. Because of the greater dependence of heavy industry on external sources of capital, stabilization is a necessary precondition for the extension of additional foreign loans; at the same time, the successive phases of import substitution require higher rates of capital accumulation because of the capital intensity of industry and consequent reductions in real wages[9].

The similarity of the orthodox economic policies introduced by authoritarian regimes in the 1970s has been well documented[10]. If, in fact, similar macro-economic policies carry over to a similar approach towards budgetary allocations and priorities, the O'Donnell thesis would predict cutbacks in social services and welfare in bureaucratic authoritarian regimes to aid the stabilization efforts with increased military expenditures to shore up domestic security. One would predict, therefore, based on the change in regimes from a high-threat bureaucratic-authoritarian to a civilian regime in 1984, a marked shift downward in military expenditures.

PREVIOUS EMPIRICAL EXAMINATIONS OF REGIME TYPE AND BUDGETARY PRIORITIES

This conclusion also has some empirical validity. In a recent examination of civilian and military

regimes in ten Latin American countries, Diskson found that[11]:

1. Military regimes appear to have been more fiscally conservative than their civilian counterparts;
2. Civilian regimes appear to have been more developmentally oriented than military regimes;
3. Military regimes were inclined to spend less and run lower deficits, even though they spent more on the military;
4. Military regimes also showed a lower rate of increase in the cost of living and maintained stronger international liquidity positions for the central bank, and
5. Civilian regimes spent more, did more for educations and effected higher savings and investment ratios.

On the other hand, a number of empirical studies along these lines have provided little empirical support for the O'Donnell thesis, or for the general proposition that military regimes tend to expand military budgets over and above what one might predict a civilian regime would undertake. Most[12], for example, found little change in military expenditures or most other socioeconomic variables in Argentina during the post-1966 transition to bureaucratic-authoritarian rule from a civilian regime. Other studies also concluded that governments which are dominated by the military produce socioeconomic results quite similar to those produced by civilian regimes[13]. As P. Schmitter commented in summarizing this research[14]:

The conclusions have tended to be similar whether arrived at by statistical inference, from synchronic correlations across units, or descriptive evaluation based on diachronic counter-factual assumptions within units. We have been led to believe that the relatively constant features of ednological setting and underlying class interests and or the persistence of subtle machinations by informal cliques and patron-client dyads impose such narrow and fixed parameters upon performance that it makes no real difference

if political structures are more or less centralized, more or less competitive, or more or less participatory. Such an overdetermined system (provided the three layers of determinism are self-reinforcing) will produce the same outputs and outcomes--i.e., benefit the same interests--in any case short of violent revolution.

A number of other studies have found the same pattern.

Jackman[15] examining seventy-seven Third World countries using co-variance analysis concluded that[16]:

military intervention in the politics of the Third World has no unique effects on social change, regardless of either the level of economic development or geographic region.

Two cross-national aggregate studies by McKinlay and Cohan[17] based on an initial sample of 115 countries reached conclusions that were very similar to Jackman's. In the first of these studies, McKinlay and Cohan compared the performance of military and civilian governments over the 1951-70 period, using indicators of annual change in per capita GNP, cost of living, food production, exports, primary education, military spending, and military size. They found that military regimes performed significantly better than civilian in the poorest countries (although their evidence also suggests that in Latin American, military regimes perform somewhat better than their civilian counterparts). However, McKinlay and Cohan concluded that military regimes do not in the aggregate form a distinctive regime type in terms of performance. They found that the rate of growth of primary education was the only overall significant performance difference between military and civilian regimes.

The second study by McKinlay and Cohan covering the 1961-70 period used different data and statistical

techniques to arrive at the same basic conclusion. In this study, McKinlay and Cohan found evidence that military regimes tend to occupy a weaker international trading position than their civilian counterparts, but that their economic performance rates, measured in terms of the rate of growth of per capita GNP cost of living and exports, compared favorably with non-civilian regimes only by their lower levels of political activity and higher levels of political change.

The most extensive study to date of the consequences of regime differences in Latin America, a study by P. Schmitter[18], partially confirms the findings of these cross-regional studies. Using both cross-sectional and longitudinal data, Schmitter concluded that no regime type was exclusively linked with developmental success as measured by such indicators of performance as average annual percentage increases in inflation, exports, industrial production and per capita GNP.

Military and non-competitive regimes were slightly more successful in curtailing inflation, increasing foreign exchange earnings and promoting economic growth, especially in industry; however, environmental factors, particularly dependence on foreign capital, aid and trade were more important in understanding the performance variations than were factors such as regime type.

Regime type only appeared relevant for understanding variations in governmental allocation outputs as distinct from system performance (outcomes). In particular, Schmitter found that military regimes in Latin America tend to spend less on social welfare, rely more heavily on indirect taxation as a source of government revenue, and extract fewer resources for the

pursuit of public policies than civilian regimes. However, most correlations between regime type and policy outputs were weak, supporting the view that regime differences are relatively unimportant for understanding policy differences in Latin America.

A major study of Brazil also cast doubt on the relevance of regime differences. Margaret Daly Hayes[19]' detailed work on longitudinal changes in Brazilian national expenditures for example indicated that military and civilian regimes in Brazil have not differed extensively in their economic goals and policy outputs. Compared to their military counterparts, civilian governments in the 1950-67 period were more likely to spend money on social development and the civilian bureaucracy and less likely to spend funds on military equipment. However, all regimes in this period gave priority to national development with an emphasis on infrastructural development. Moreover, ecological constraints, particularly GDP, political conflict, primary export earnings, inflation and debt service explain a high proportion of the variation in expenditure patterns over time.

Finally, Ames and Goff have noted[20]

If students of Latin American politics were to inventory verified propositions regarding the performance of Latin American regimes, the resulting list might not exceed zero.

In summary while there is some evidence that the more recent bureaucratic-authoritarian regimes in Latin America tend to pursue similar macro-economic policies, recent research on budgetary priorities clearly suggests that underlying socioeconomic conditions may impose such severe constraints on political actors that it makes little difference whether they are civilian or military. Similar conclusions have been reached by

studies employing very different units of analysis and research strategies.

Why do Latin Americanists argue that history has shown regime type to be irrelevant in affecting budgetary priorities. In addition to the empirical work cited above, one line of argument stresses ecological constraints, and suggests that socioeconomic variables are more important in explaining policy differences than political variables. In particular, the dependency literature has emphasized the dynamics and structure of economic development in Latin America cannot be understood without taking into account factors such as imperial domination, foreign investment and technology, foreign aid, and export demand -- factors that domestic policy makers cannot control directly[21]. A major variant on this argument suggests that civilian and military regimes do not even have different policy orientations, either because the civilian-military dichotomy is totally artificial, or because the same class, sectoral, or status group interests control the government (no matter who occupies the top positions).

Finally, the policy relevance of system level characteristics have been questioned on the grounds that factors such as operational systems and formal institutional arrangements which may account for policy variations are not systematically related to regime type or regime orientation[22].

Before concluding that Latin Americanists, who have expended considerable time and effort expanding the causes of regime variations, have been totally misguided, it should be noted that all of the above-mentioned empirical studies suffer from a fundamental weakness[23]. By assuming that regime type has the same meaning across political units, time periods, and

even cultural regions, existing studies of public policy have built their conclusions into their questions. Obviously, military regimes do not form a homogenous group. Military governments are reformist as well as reactionary, populist as well as authoritarian, personalist as well as corporatist. By aggregating all types of military regimes, much of the research to date has ensured that differences in regime type will appear irrelevant. Moreover, the use of the civilian military dichotomy has obscured possible overlaps between civilian and military governments. Officers may exercise substantial influence even if civilians are in top positions and vice versa.

In short, the literature is deeply divided on the basic theoretical question: do the policies and performance records of military regimes differ from those of civilian regimes. Much of the literature suggests that they do, but disagrees on the nature of the differences, while much of the literature suggests that they do not. In such a situation empirical tests taking into account some of the limitations noted above must ultimately be performed to throw additional light on the matter.

EMPIRICAL EVIDENCE FOR ARGENTINA

Is there some statistical evidence for Argentina linking the pattern of military expenditures to regime type. Simple and multiple regression analyses were performed on time-series data on the level of real military expenditures to determine the significance of regime type in accounting for fluctuations in military expenditure over time[24].

The regime type variables were treated through the use of dummy variables. During the period under examination, four regimes governed[25]:

1. 1961-1965 -- period of democracy;
2. 1966-1972 -- first military regime;
3. 1973-1976 -- Peronist regime;
4. 1977-1982 -- second military regime.

There is sufficient reason to believe that regime type does not have the same meaning over time, i.e., the first and second military regimes might, in fact, have few similarities with regard to economic policy. The same could also be said for the elected Peronist civilian regime (1973-76) and the non-Peronist civilian regime (1961-65). At least eight logical representations of the 1961-82 regime types make sense (Table 1) with:

1. DUMPB, representing the standard civilian military dichotomy;
2. DUMP, depicting structural shifts upwards over time between the 1960s regimes to the Peronists and finally the second military regime. If DUMP is statistically significant, the country would have experienced two sharp breaks upward in the amount of funds allocated to military activities during the 1961-82 period;
3. DUMPA, similar to DUMP, with three upward structural shifts produced with regime changes, i.e., increased militarization over time in Argentina;
4. DUMPC assumes military regimes in Argentina to allocate significantly more resources to defense than their civilian counterparts, with the Peronists more inclined to increase defense than their civilian counterparts in the early 1960s;
5. DUMPD is similar to DUMPC, but with the first civilian regime assumed more prone to step up military spending than the Peronists;
6. DUMPE assumes the Peronists least likely to give priority to defense, followed by the first civilian regime, then the first military regime, with the second military regime most inclined to increased military spending;
7. DUMPF assumes no real change in military allocation priorities in the 1960s, a sharp fall off under the civilian Peronist regime, and a major shift upwards under the second military regime. This interpretation is often implicitly assumed in the qualitative literature; and
8. DUMPG assuming again the Peronists least likely to undertake military expenditures, followed by

TABLE 1
ARGENTINA POLITICAL DUMMY VARIABLES, 1961-1982

YEAR	DUMP	DUMPA	DUMPB	DUMPC	DUMPD	DUMPE	DUMPF	DUMPG
1961	0	0	0	0	1	1	1	1
1962	0	0	0	0	1	1	1	1
1963	0	0	0	0	1	1	1	1
1964	0	0	0	0	1	1	1	1
1965	0	0	0	0	1	1	1	1
1966	0	1	1	2	2	2	1	3
1967	0	1	1	2	2	2	1	3
1968	0	1	1	2	2	2	1	3
1969	0	1	1	2	2	2	1	3
1970*	0	1	1	2	2	2	1	3
1971	0	1	1	2	2	2	1	3
1972	0	1	1	2	2	2	1	3
1973	1	2	1	1	0	0	1	0
1974	1	2	1	1	0	0	1	0
1975	1	2	1	1	0	0	1	0
1976	2	3	1	2	3	3	2	2
1977	2	3	1	2	3	3	2	2
1978	2	3	1	2	3	3	2	2
1979	2	3	1	2	3	3	2	2
1980	2	3	1	2	3	3	2	2
1981	2	3	1	2	3	3	2	2
1982	2	3	1	2	3	3	2	2

NOTE 1961-65 period of democracy
1966-72 first military regime
1973-76 Peronist regime
1977-82 second military regime

the first civilian regime. This dummy is used to test whether or not the first military regime was more inclined to allocate funds for defense purposes than their counterparts in the second military regime.

Again, by themselves, these dummy variables are used to test whether any structural shifts occurred with changes in regime type. Real Central Government revenues are used as a control variable to account for any movements in military expenditures that may have resulted simply from corresponding revenue increases or declines.

Regressions were performed for each dummy individually, and for three time periods:

1. 1961-75;
2. 1961-82; and
3. 1966-82.

to determine the extent to which the second military regime affected the pattern of military expenditures. The Cochrane-Orcutt [26] iterative procedure was employed to correct for any serial correlation in the error terms.

In general the results (Table 2) indicate that:

1. Regime type is highly important in explaining the pattern of Argentine military expenditures over time (based on the high statistical significance of the dummy variable);
2. Military regimes are much more inclined (given Central Government revenues) to allocate funds for defense (high statistical significance and positive sign for dummy variables in 1961-75, and 1966-82 sub-periods;
3. The Peronists were clearly the least likely to allocate funds for defense (high statistical significance of DUMPD and DUMPE for the 1961-75 period);
4. There has not been a progressive upward shift in military expenditures over time (statistical significance of DUMPA);
5. Military allocations are not based simply on the dichotomy between civilian and military regimes (statistical significance of DUMPB over the 1961-82 period), and

TABLE 2
ARGENTINA: IMPACT OF POLITICAL CHANGE ON THE LEVEL OF DEFENSE EXPENDITURES
SHIFT ANALYSIS 1961-1982

Period Defense Expenditures =	Political Shift Variable	Central Government Revenues	RHO	Statistics	
				F ²	DW
1961-75	DIMP	(5.51)	(-0.39)	0.856	29.86
1961-82	(-8.02)	(2.04)	(1.06)	0.218	2.52
1966-82	(-0.87)	(2.17)	(0.26)	0.289	2.44
	DUMPA	(1.08)	(0.61)	0.172	1.04
1961-75	(-1.45)	(2.18)	(0.63)	0.285	3.57
1961-82	(-1.17)	(2.17)	(0.26)	0.289	2.44
1966-82	(-1.03)	(2.17)	(0.26)	0.289	2.44
	DUMPB	(-2.71)	(-0.79)	0.934	71.75
1961-75	(12.43)	(1.46)	(0.34)	0.285	3.57
1961-82	(1.19)	(4.53)	(0.01)	0.774	20.62
1966-82	(4.50)	(-4.21)	(-0.73)	0.842	26.64
	DUMPC	(1.33)	(0.98)	0.201	2.26
1961-75	(7.57)	(4.53)	(0.01)	0.774	20.62
1961-82	(0.49)	(-4.21)	(-0.73)	0.842	26.64
1966-82	(4.50)	(1.33)	(0.98)	0.201	2.26
	DUMPD	(3.16)	(-0.90)	0.951	97.14
1961-75	(14.47)	(2.63)	(-1.72)	0.504	9.16
1961-82	(2.37)	(4.53)	(0.01)	0.774	20.62
1966-82	(4.50)	(3.16)	(-0.90)	0.951	97.14
	DUMPE	(2.63)	(-1.72)	0.504	9.16
1961-75	(14.47)	(4.53)	(0.01)	0.774	20.62
1961-82	(2.37)	(3.16)	(-0.90)	0.951	97.14
1966-82	(4.50)	(2.63)	(-1.72)	0.504	9.16
	DUMPF	(5.51)	(-0.39)	0.856	29.86
1961-75	(8.02)	(2.04)	(1.06)	0.218	2.52
1961-82	(2.55)	(2.17)	(0.26)	0.289	2.44
1966-82	(1.28)	(2.17)	(0.26)	0.289	2.44
	DUMPG	(-0.69)	(-0.85)	0.951	98.26
1961-75	(14.55)	(2.27)	(0.34)	0.316	4.16
1961-82	(1.52)	(4.46)	(-3.96)	0.649	11.10
1966-82	(3.24)	(0.69)	(-0.85)	0.951	98.26

NOTES: Estimates made using Cochrane-Orcutt iterative estimation procedure to correct for serial correlation; Defense expenditures are nominal defense expenditures deflated by consumer price index (1974 = 100); See text for definition of political dummy variables

6. It is not clear whether the second military regime was more inclined to allocate funds for defense than the first military regime (as suggested by the generally lower *t* values for 1961-1982 period than for either sub-period and insignificant *t* value for DUMPF for the 1966-82 sub-period).

A structural shift in defense expenditures (a shift in the intercept of the regression equation) is one possible way to test for changing military priorities of alternative regime types. Another test would be to determine whether the propensity to spend out of revenues differed by regime type, i.e., whether the slope of the regression line was statistically different for alternative regimes. To test for this possible phenomenon, an interaction variable[27] was created by multiplying each dummy variable defined above by the level of real Central Government revenues. The result is depicted by an X at the end of each dummy, i.e., DUMPX. Here, these variables are referred to as modification variables.

When each modification variable was regressed together with the Central Government revenues, the results indicated that (Table 3):

1. Again, regime type was highly important in accounting for the observed fluctuations over time in military expenditures;
2. For the period as a whole, the rankings in ascending order of propensity to spend on defense are Peronists, first civilian regime, first military regime, and second military regime (high significance of DUMPEX for the period as a whole);
3. The first military regime was less inclined to increase military expenditures with revenues than the first (insignificant value of DUMPGX for the period as a whole), and
4. The country has not been more inclined over time to allocate existing funds for defense (insignificance of DUMPX and DUMPAX).

Finally, tests were performed to determine whether regime change was more effective in influencing

TABLE 3
ARGENTINA IMPACT OF POLITICAL CHANGE ON THE LEVEL OF DEFENSE EXPENDITURES
MODIFICATION ANALYSIS 1961-1982

Period	Defense Expenditures =	Political Modification Variable	Central Government Revenues	RHO	Statistics	
					<i>r</i> ²	DW
1961-75	DUMPX	(-3.77)	(5.96)	(0.50)	0.876	35.63
1961-82	(-0.37)	(1.51)	(1.05)	(0.50)	0.192	2.15
1966-82	(-0.77)	(1.76)	(0.42)	(0.42)	0.257	2.08
1961-75	DUMPAX	(-2.89)	(2.60)	(2.02)	0.444	3.93
1961-82	(-0.54)	(1.38)	(0.98)	(0.98)	0.203	2.29
1966-82	(-0.11)	(1.76)	(0.42)	(0.42)	0.257	2.08
1961-75	DUMPGX	(12.94)	(-3.06)	(-0.40)	0.939	77.59
1961-82	(2.00)	(0.75)	(0.91)	(0.91)	0.433	0.370
1966-82	(5.29)	(2.67)	(0.10)	(0.10)	0.822	27.71
1961-75	DUMPCX	(8.83)	(-5.70)	(0.463)	0.878	36.21
1961-82	(1.03)	(0.44)	(0.20)	(0.20)	0.251	3.02
1966-82	(5.29)	(2.67)	0.10	0.10	0.522	27.71
1961-75	DUMPEX	(12.57)	(0.32)	(0.05)	0.936	73.15
1961-82	(3.64)	(1.42)	(0.67)	(0.67)	0.671	18.78
1966-82	(5.29)	(2.67)	(0.01)	(0.01)	0.822	77.71
1961-75	DUMPEX	(12.57)	(0.32)	(0.05)	0.936	73.15
1961-82	(7.20)	(0.57)	(0.01)	(0.01)	0.884	66.57
1966-82	(6.38)	(0.67)	(0.01)	(0.01)	0.868	39.53
1961-75	DUMPEX	(8.77)	(2.84)	(0.50)	0.833	35.63
1961-82	(3.20)	(0.95)	(-5.81)	(-5.81)	(0.638)	15.86
1966-82	(3.21)	(0.16)	(0.01)	(0.01)	(0.670)	12.19
1961-75	DUMPGX	(13.31)	(-0.96)	-0.17	0.942	82.12
1961-82	(1.83)	(1.62)	(-0.03)	(-0.03)	0.369	5.28
1966-82	(3.32)	(3.55)	(-4.21)	(-4.21)	0.658	11.58

NOTES: Regressions made using Cochrane-Orcutt iterative estimation procedure to correct for serial correlation; Political modification variable formed by multiplying of respective political variable by the level of central government revenues in constant (1980) prices. Defense expenditures are nominal defense expenditures deflated by the consumer price index (1974 = 100).

military expenditures through shifting the regression line while keeping the propensity to spend out of revenues constant, or shifting the regression line with no structural shift in the pattern of defense expenditures, or some combination of both.

The results indicate (Table 4):

1. A general tendency to increase the propensity of military expenditure with the second military regime (the consistently higher t values for the modification variables for the 1961-1982 period over the 1961-1975 period);
2. The interaction variable, in general, is more indicative of structural change with regime type (than the dummy shift variable), i.e., there appears to be more of an inclination for the propensity to increase military expenditure to growth larger as regimes shift from civilian to military (the generally higher t values for the modification variables compared with the shift variables), and
3. Political changes appear more important in affecting military expenditures than changes in government revenues, particularly when the second military regime is included in the analysis (as indicated by the generally insignificant t values for government revenues for the period as a whole).

Clearly, if in fact regime change is so important in accounting for movements in the level of military expenditure, the share of the public sector budgetary allocations to defense ought to depict the same general pattern. Using government expenditure as a percent of gross domestic product as a control variable, regressions were performed using the political shift dummy. Again three time periods were considered: (a) 1961-1975; (b) 1961-1982, and (c) 1966-1982.

The results indicate (Table 5):

1. The long-run trend is for military expenditures to decline as government expenditures increase relative to overall gross domestic product (the consistently negative sign on the control variable);
2. The general pattern of structural shift upward in defense expenditures when regimes change from

TABLE 4
ARGENTINA: IMPACT OF POLITICAL CHANGE ON THE LEVEL OF DEFENSE EXPENDITURES
SHIFT AND MODIFICATION ANALYSIS, 1961-1982

Period	Political Modification Variable	Political Shift Variable	Central Government Revenues	RHO	Statistics	
					F	DW
1961-75	DMPX (-3.08)	DUMP (1.51)	(6.18)	(0.67)	0.895	25.60
1961-82	(2.58)	(-2.70)	(0.76)	(-0.53)	0.500	5.00
1961-75	DUMPAX (-7.35)	DUMPA (5.12)	(7.74)	(0.22)	0.936	28.90
1961-82	(-1.85)	(1.45)	(0.98)	(0.09)	0.388	3.17
1961-75	DUMPBX (1.65)	DUMPB (-0.37)	(-2.78)	(0.22)	0.936	44.7
1961-82	(4.69)	(-3.45)	(-1.08)	0.01	0.851	18.69
1961-75	DUMPCX (3.30)	DUMPC (-2.12)	(-5.09)	(0.22)	0.889	24.02
1961-82	(3.73)	(-3.23)	(-2.13)	(-5.64)	0.201	11.72
1961-75	DUMPD (0.87)	DUMPD (0.30)	(0.39)	(-19.15)	0.940	47.40
1961-82	(3.60)	(-2.55)	(-1.37)	(0.01)	0.863	38.22
1961-75	DUMPEX (0.87)	DUMPE (0.29)	(0.39)	-0.15	0.940	47.60
1961-82	(2.48)	(-1.10)	(-0.56)	(0.01)	0.899	44.71
1961-75	DUMFEX (3.08)	DUMFE (-1.51)	(-0.20)	(0.67)	0.895	25.60
1961-82	(2.08)	(-1.81)	(-1.47)	(-3.55)	0.660	9.73
1961-75	DUMPGX (0.84)	DUMPG (0.37)	(-0.28)	(-0.39)	0.946	53.50
1961-82	(2.84)	(-2.44)	(-1.10)	(-5.66)	0.701	11.72

NOTES: Regressions made using Cochrane-Orcutt iterative estimation procedure to correct for serial correlation. Political modification variable formed by multiplying respective political variable by the level of central government revenues in constant 1980 prices. Defense expenditures are nominal defense expenditures deflated by consumer price index (1974 = 100).

TABLE 5
ARGENTINA: IMPACT OF POLITICAL CHANGE ON THE SHARE OF DEFENSE EXPENDITURES
IN THE TOTAL CENTRAL GOVERNMENT BUDGET, SHIFT ANALYSES, 1961-82

Budgetary Item	Defense Share of Central Government Budget	Political Variable	Government Expenditures as a % of		Statistics	
			Gross Domestic Product	RHO	F	DR
() = t statistic						
1961-75						
1961-82						
1966-82						
1961-75		DUMP	(-2.86)	(2.55)	0.405	8.18
1961-82		(-1.26)	(-2.66)	(4.96)	0.271	7.09
1966-82		(1.57)	(-3.37)	(7.01)	0.440	11.03
1961-75		DUMPA	(1.22)	(1.86)	0.535	5.76
1961-82		(1.35)	(-3.09)	(3.87)	0.350	4.85
1966-82		(0.93)	(-3.42)	(4.84)	0.475	5.43
1961-75		DUMPB	(-2.29)	(3.40)	0.392	3.23
1961-82		(2.36)	(-3.77)	(4.55)	0.442	7.13
1966-82		(1.35)	(-3.47)	(4.84)	0.475	5.43
1961-75		DUMPC	(-2.58)	(3.03)	0.523	5.49
1961-82		(2.61)	(-2.99)	(4.49)	0.469	7.96
1966-82		(1.64)	(-2.52)	4.80	0.503	6.07
1961-75		DUMPD	(-3.07)	(3.54)	0.536	5.77
1961-82		(2.18)	(-3.29)	(5.31)	0.468	7.94
1966-82		(2.56)	(-2.52)	(4.80)	0.503	6.07
1961-75		DUMPE	(-2.03)	(2.54)	0.520	5.42
1961-82		(1.61)	(-2.68)	(3.78)	0.453	7.47
1966-82		(2.53)	(-2.52)	(4.80)	0.503	6.07
1961-75		DUMPF	(-2.03)	(2.54)	0.520	5.42
1961-82		(3.02)	(-3.39)	(3.00)	0.501	9.05
1966-82		(5.45)	(-3.83)	(-0.36)	0.727	16.01
1961-75		DUMPG	(-1.22)	(1.86)	(0.535)	5.76
1961-82		(3.47)	(-3.88)	(1.84)	0.536	10.43
1966-82		(5.95)	(-4.92)	(-0.50)	0.758	18.84
1961-75		DUMPH	(-2.25)	(2.73)	0.519	5.41
1961-82		(2.15)	(-2.46)	(4.80)	0.419	6.05
1966-82		(1.20)	(-2.49)	(5.89)	0.484	5.63

NOTE: Regressions made using Cochrane Orcutt iterative technique to correct for serial correlation

- civilian to military is confirmed (the positive signs on the shift variable);
- The second military regime appears to have had the highest inclination to increase the share of the budget going to defense, followed by the second military regime, the first civilian regime and finally the Peronists (the high statistical significance of DUMPE for the 1961-1982 period);
- There may be little difference between the first civilian regime and the first military regime in allocating expenditures for defense (the high overall significance for DUMPF), and
- The most dramatic increases in government share occurred with the shift in regimes from Peronist to second military (the very high t value for DUMPF and DUMPE for 1966-82, compared with an insignificant value for 1961-75).

In general, therefore, analysis of the share of government allocations going to defense confirm all the patterns discovered from the above analysis of total military expenditures.

As with the level of military expenditures, regressions were performed to determine whether the slope of the regression line[28] changed with regime.

The results (Table 6) confirm that regime changes have a strong impact on the manner in which the Central Government allocates funds for defense. In general:

- There is a strong propensity to increase military expenditures when a shift from civilian to military regime takes place and vice versa (the statistically significant and positive t values for the 1961-1982 period in all cases);
- The shift towards an increased propensity to spend was fairly weak and perhaps insignificant for the first change from civilian to military regime (the values of t slightly under 2.0 for the dummy variables for the 1961-1975 period);
- A strong shift in the propensity to increase military expenditures under the second military regime existed (the high and positive t values for the 1966-1982 period);
- In terms of an increased tendency to spend on defense, the second military regime was most inclined, followed by the first military regime, the first civilian regime, and finally the Peronists, and

TABLE 6
ARGENTINA: IMPACT OF POLITICAL CHANGE ON THE SHARE OF DEFENSE EXPENDITURES
IN THE TOTAL CENTRAL GOVERNMENT BUDGET, MODIFICATION ANALYSIS, 1961-82

() = t statistic	Period	Political Modification Variable	Government Expenditures as a % of GDP	RHO	r ²	Statistics F	DW
	1961-75	DUMPX (-2.06)	(0.51)	(1.91)	0.613	7.93	1.84
	1961-82	(2.11)	(-3.47)	(3.38)	0.402	6.06	1.59
	1966-82	(2.05)	(-3.70)	(3.81)	0.515	6.38	1.55
	1961-75	DUMPAX (0.29)	(-1.43)	(2.83)	0.387	3.61	1.55
	1961-82	(2.45)	-3.80	(3.81)	0.445	7.23	1.75
	1966-82	(1.90)	-3.57	(3.80)	0.496	5.91	1.62
	1961-75	DUMPBX (1.78)	(-2.50)	(3.04)	0.510	5.20	1.83
	1961-82	(3.31)	(-3.51)	(3.98)	0.540	10.59	1.91
	1966-82	(5.28)	(-3.33)	(9.22)	0.722	15.62	1.69
	1961-75	DUMPCX (1.62)	(-3.01)	(3.23)	0.478	4.59	1.76
	1961-82	(3.09)	(-3.84)	(-4.59)	0.522	9.83	1.91
	1966-82	(6.03)	(-4.58)	(-0.20)	0.765	19.60	1.83
	1961-75	DUMPDY (1.42)	(-2.23)	(2.60)	0.493	4.88	1.82
	1961-82	(3.25)	(-3.42)	(3.22)	0.528	10.08	1.92
	1966-82	(5.28)	(-3.33)	(0.22)	0.722	15.62	1.69
	1961-75	DUMPEX (1.42)	(-2.23)	(2.60)	0.493	4.88	1.82
	1961-82	(3.92)	(-4.41)	(2.52)	0.589	12.91	1.99
	1966-82	(7.19)	(-5.79)	(-0.41)	0.819	27.24	1.70
	1961-75	DUMPEX (1.02)	(-1.91)	(2.19)	0.486	4.73	1.78
	1961-82	(4.48)	(-5.10)	(1.57)	0.631	15.43	1.93
	1966-82	(7.09)	(-6.32)	(-0.19)	0.817	26.82	1.79
	1961-75	DUMPGX (1.54)	(-2.33)	(2.74)	0.498	4.97	1.83
	1961-82	(2.61)	(-2.74)	(4.32)	0.467	7.90	1.74
	1966-82	(1.72)	(-2.41)	(4.92)	0.514	6.36	1.64

NOTES: Regressions made using Cochrane-Orcutt iterative estimation procedure to correct for serial correlation.
Political modification variable formed by multiplying respective political variable by the level of
central government revenues in constant (1980) prices.

5. Again, there is not strong evidence that the first civilian and first military regimes had statistically different propensities to spend on defense (statistically significant DUMPX for 1961-1975 and generally insignificant dummies for 1961-1975).

The combined effects (Table 7) of the dummy (shift in slope) and modification (change in slope) were also tested to determine the overall manner in which changes in political regime impacted on defense expenditures. In general:

1. The major impact of political change appears to be in affecting the propensity to spend on military activities (the modification variable tends to be statistically significant while the political shift variable is not);
2. Again, the results show no real secular trend upward or downward in the propensity to change military expenditures from regime to regime (insignificance of DUMPA, DUMPAX for 1961-1982);
3. The highest t value for the 1966-1985 period was obtained assuming both military regimes having the same propensity to spend on defense (DUMPDY), but slightly higher t values for the period as a whole were obtained assuming a higher propensity on the part of the second military regime (DUMPEX, DUMPEX), and
4. The first military regime and first civilian regime were quite similar in their propensity to spend on defense (statistical significance of DUMPX, 1961-1975, DUMPEX, 1961-1982), particularly when the 1961-1975 period was examined. The first military regime did tend to have a higher propensity than the first civilian regime to spend on defense in the context of the period as a whole (statistical significance of DUMPBX, DUMPEX).

Beginning in 1972, the share of government budget allocated to servicing the public sector's debt increased dramatically from 0.1 percent in 1971 to 4.4 percent in 1972. This share continued to increase to 11.5 percent in 1976, 16.3 percent in 1980, and 37.1 percent in 1982. It must be argued that this rapid increase in debt service payments tended to affect the share of defense in the government's budget, irrespective of regime type, thus producing a

TABLE 7
ARGENTINA. IMPACT OF POLITICAL CHANGE ON THE SHARE OF DEFENSE EXPENDITURES IN THE
TOTAL CENTRAL GOVERNMENT BUDGET: SHIFT AND MODIFICATION ANALYSIS, 1961-1982

Period	Variable	Variable	Variable	Variable	Variable	Variable	Variable	Variable
	DUMP	DUMPA	DUMPB	DUMPC	DUMPD	DUMPE	DUMPF	DUMPG
1961-75	(1.95)	(-2.60)	(-0.15)	(2.85)	0.661	5.87	1.61	
1961-82	(-0.56)	(1.36)	(-3.34)	(3.09)	0.418	3.59	1.66	
1966-82	(-0.40)	(1.26)	(-3.53)	(3.53)	0.520	4.34	1.64	
1961-75	(2.42)	(-2.28)	(-0.55)	(3.62)	0.596	4.43	1.27	
1961-82	(0.75)	(0.78)	(-3.80)	(4.25)	0.459	4.25	1.64	
1966-82	(0.93)	(0.21)	(-3.44)	(3.90)	0.499	3.98	1.57	
1961-75	(-0.31)	(-0.31)	(-2.50)	(3.00)	0.529	3.37	1.64	
1961-82	(-1.32)	(2.26)	(-3.99)	(0.57)	0.585	7.05	2.17	
1966-82	(-1.97)	(3.27)	(-3.97)	(0.60)	0.769	13.38	1.97	
1961-75	(1.77)	(-1.20)	(-2.58)	(3.58)	0.594	4.39	1.30	
1961-82	(-0.27)	(1.51)	(-3.73)	(4.45)	0.523	5.49	1.99	
1966-82	(-0.19)	(2.66)	(-3.38)	(-0.12)	0.761	12.78	1.89	
1961-75	(0.92)	(-0.61)	(-1.66)	(2.35)	0.550	3.67	1.70	
1961-82	(-0.99)	(1.93)	(-3.53)	(3.02)	0.557	6.30	2.06	
1966-82	(-1.97)	(3.27)	(-3.97)	(0.60)	0.769	13.38	1.97	
1961-75	(0.92)	(-0.61)	(-1.66)	(2.35)	0.550	3.67	1.70	
1961-82	(-0.90)	(2.03)	(-4.37)	(2.47)	0.609	7.81	2.08	
1966-82	(-1.34)	(2.87)	(-5.16)	(0.38)	0.803	16.27	1.95	
1961-75	(0.63)	(-0.18)	(0.54)	(1.79)	0.545	3.59	1.80	
1961-82	(-0.85)	(2.09)	(-4.61)	(1.91)	0.627	8.43	1.99	
1966-82	(-1.14)	(2.65)	(-5.67)	(0.50)	0.799	15.93	1.97	
1961-75	(0.87)	(-0.57)	(-2.08)	(2.61)	0.542	3.55	1.66	
1961-82	(-1.05)	(1.73)	(-2.99)	(3.74)	0.499	4.99	1.99	
1966-82	(-2.57)	(3.47)	(-2.98)	(-0.86)	0.71	9.90	1.96	

NOTES: Regressions made using Cochrane-Orcutt iterative estimation procedure to correct for serial correlation.
Debt service payments included in budget.
Political modification variable formed by multiplying respective political variable by the level of
Central government revenues in constant (1980) prices.

systematic bias in the results, presumably underestimating the impact of the second military regime on defense allocations.

To determine whether the results presented above were significantly affected by the rapid build-up of debt service obligations, regressions were run with defense share computed as the percent of the budget that was not related to debt servicing. Again, three sets of regressions were estimated: (a) the shift in military expenditures with regime change, (b) the modification of the propensity to increase defense expenditures with regime change, and (c) a combined shift-modification analysis.

The results of the shift analysis (Table 8) again show:

- There is no trend upwards or downwards with regime change;
- The pattern of increase in military expenditures with changes from civilian to military regimes is much clearer than was the case when government debt servicing was included in the budget for computing the share of defense (much higher t values and r^2 —especially in the 1966-1982 period);
- The ranking (DUMPE) of second military, first military, first civilian, and Peronist in terms of inclination to spend on defense is extremely strong statistically, but is contradicted by DUMPF which assumes no difference in the first military and first civilian regimes, and
- The increase in military expenditures by the second military regime is particularly striking when the 1966-1982 period is considered.

The same general results were obtained from the modification (Table 9) and combined modification and shift analysis (Table 10).

TABLE 8
ARGENTINA: IMPACT OF POLITICAL CHANGE ON THE SHARE OF DEFENSE EXPENDITURES IN THE NON DEBT SERVICE
CENTRAL GOVERNMENT BUDGETARY ITEMS, SHIFT ANALYSIS, 1961-1982

Period	Political Shift Variable	Government Expenditures as a % of GDP	RHO	Statistics		
				r ²	F	DW
1961-75	DUMPE	(-0.86)	(1.31)	0.445	4.01	1.70
1961-82	(-1.03)	(-1.45)	(4.93)	0.160	1.71	1.62
1966-82	(1.71)	(-2.72)	(13.05)	0.367	3.94	1.50
1961-75	DUMPA	(-1.64)	(2.18)	0.331	2.48	1.53
1961-82	(0.46)	(-1.99)	(6.03)	0.229	2.67	1.60
1966-82	(2.00)	(-2.72)	(13.05)	0.367	3.94	1.50
1961-75	DUMPB	(-2.13)	(2.33)	0.403	3.38	1.57
1961-82	(1.32)	(-1.66)	(10.24)	0.373	5.36	1.87
1966-82	(2.54)	(5.15)	(0.93)	0.655	35.39	1.64
1961-75	DUMPC	(-2.48)	(2.77)	0.407	3.44	1.48
1961-82	(1.52)	(-2.19)	(13.15)	0.352	4.90	1.56
1966-82	(2.23)	(5.15)	(-0.93)	0.855	35.39	1.64
1961-75	DUMPD	(-1.66)	(1.93)	0.409	3.46	1.63
1961-82	(2.65)	(-1.09)	(7.94)	0.360	5.07	2.11
1966-82	(7.30)	(5.15)	(-0.93)	0.855	35.39	1.64
1961-75	DUMPE	(-1.60)	(1.93)	0.409	3.46	1.63
1961-82	(1.15)	(-0.17)	(3.17)	0.454	7.48	2.36
1966-82	(3.85)	(4.49)	(-3.89)	0.968	186.98	1.68
1961-75	DUMPF	(-0.87)	(1.31)	0.445	4.01	1.70
1961-82	(1.03)	(-0.29)	(0.09)	0.788	33.51	2.03
1966-82	(7.41)	(0.62)	(-3.74)	0.972	208.98	2.03
1961-75	DUMPG	(-1.85)	(2.09)	0.405	3.40	1.61
1961-82	(1.22)	(-1.65)	(13.50)	0.360	5.06	1.81
1966-82	(2.27)	(-1.76)	(11.49)	0.460	5.00	2.01
1961-75	(1.71)					

NOTES: Regressions made using Cochrane-Orcutt iterative estimation procedure to correct for serial correlation.
Defense share computed as the proportion of the government budget excluding debt service payments.
See text for definition of political variables.

The general picture that emerges from the last three sets of regressions (Tables 8,9,10) is that DUMPF provides the best depiction of military regimes, particularly over the whole (1961-1982) period.

SUMMARY

In summary, the analysis presented above indicates that either DUMPE or DUMPF perform best in differentiating Argentine regimes, with respect to their propensities to spend on defense. Overall, it appears that:

1. With regard to the level of military expenditures (Table 2), DUMPE is the superior shift dummy, particularly with respect to the 1966-1982 period and also (Table 3) the superior modifying dummy;
2. Explanations of the share of defense in the government budget including debt servicing show little difference between DUMPE and DUMPF for either the shift (Table 5) or modification variables (Table 6);
3. The share of defense in the non-debt service items of the budget shows that DUMPF out-performs DUMPE on the shift (Table 8) of military expenditures with regime change, but on the modification of military expenditures (Table 9), it only out-performs DUMPE for the 1961-82 period, with DUMPE superior for the 1966-1982 period;
4. Using DUMPE for explaining the level of military expenditures, it appears that the modification influence of regime change is stronger (Table 4) than a structural shifting of defense expenditures to a higher level of revenues; that is, military regimes have stronger propensity to spend out of changes in revenues over time than their civilian counterparts, but not necessarily to spend a higher portion of existing revenues, and
5. Again using DUMPE for depicting political change, it appears (Table 10) that military regimes after 1966 not only produced a structural shift upwards in the share of the budget allocated to defense, but, in addition, increased the share of defense budget as government expenditures to defense increased.

TABLE 9
ARGENTINA: IMPACT OF POLITICAL CHANGE ON THE SHARE OF DEFENSE EXPENDITURES IN THE NON DEBT SERVICE
CENTRAL GOVERNMENT BUDGETARY ITEMS, MODIFICATION ANALYSIS, 1961-1982

Period	Political Modification Variable	Government Expenditures as a % of GDP	RHO	F ²	Statistics F	DW
1961-75	DIMPX (-1.87)	(-0.14)	(1.52)	0.527	5.57	1.68
1961-82	(1.60)	(-1.23)	(4.28)	0.131	1.36	1.68
1966-82	(0.19)	(-2.65)	(12.77)	0.351	3.25	1.47
1961-75	DIMPAX (-1.58)	(0.25)	(1.10)	0.519	5.40	1.60
1961-82	(0.43)	(-.92)	(11.75)	0.172	1.89	1.57
1966-82	(-0.18)	(-2.58)	(13.09)	0.354	3.28	1.34
1961-75	DIMPBX (1.22)	(-2.11)	(2.27)	0.394	3.25	1.61
1961-82	(2.94)	(-0.98)	(5.59)	0.354	4.93	2.16
1966-82	(9.85)	(3.92)	(-1.42)	0.914	63.96	1.77
1961-75	DIMPCX (0.92)	(-2.47)	(2.26)	0.362	2.83	1.66
1961-82	(1.85)	(-1.95)	(9.68)	0.278	3.46	1.81
1966-82	(7.42)	(1.37)	(-1.02)	0.859	36.71	2.01
1961-75	DIMPDX (0.98)	(-1.90)	(1.92)	0.391	3.22	1.64
1961-82	(3.20)	(-0.37)	(4.06)	0.365	5.18	2.25
1966-82	(9.85)	(3.92)	(-1.42)*	0.914	63.96	1.77
1961-75	DIMPFX (-1.90)	(0.98)	(1.92)	0.391	3.22	1.64
1961-82	(4.12)	(-0.69)	(2.83)	0.491	8.68	2.31
1966-82	(13.58)	(0.62)	(-2.15)	0.952	121.26	1.96
1961-75	DIMPFX (0.72)	(-1.57)	(1.60)	0.397	3.29	1.66
1961-82	(5.47)	(-1.18)	(1.35)	0.655	17.10	2.10
1966-82	(11.87)	(-1.16)	(-1.61)	0.938	92.21	1.93
1961-75	DIMPGX (1.07)	(-1.97)	92.06	0.390	3.20	1.64
1961-82	(2.25)	(-1.52)	(10.87)	0.340	4.65	1.99
1966-82	(4.97)	(3.97)	(0.14)	0.725	15.86	1.88

NOTES: Regressions made using Cochrane-Orcutt iterative estimation procedure to correct for serial correlations. Defense share computed as the proportion of the government budget excluding debt service payments. Political modification variables formed by multiplying respective political variable by the level of central government revenues in constant (1980) prices.

TABLE 10

ARGENTINA: IMPACT OF POLITICAL CHANGE ON THE SHARE OF DEFENSE EXPENDITURES IN THE
NON-DEBT SERVICE CENTRAL GOVERNMENT BUDGETARY ITEMS, SHIFT AND MODIFICATION ANALYSIS, 1961-82

Period	Political Shift Variable	Political Modification Variable	Government Expenditures % of GDP	RHO	F ²	Statistics F	DW
1961-75	DIMP (2.77)	DIMPX (-3.40)	(0.36)	(2.60)	0.688	6.62	1.52
1961-82	(0.97)	(-0.32)	(-1.44)	(5.69)	0.163	0.97	1.55
1966-82	(0.78)	(-0.57)	(-2.55)	(12.77)	0.383	2.48	1.26
1961-75	DIMPX (2.86)	(-3.23)	(0.28)	(2.24)	0.67	6.13	1.26
1961-82	(1.77)	(-0.80)	(-1.95)	(7.65)	0.266	1.81	1.35
1966-82	(1.02)	(-0.86)	(-2.45)	(12.14)	0.398	2.65	1.14
1961-75	DIMPX (0.35)	(-0.36)	(-2.08)	(2.31)	0.411	2.09	1.50
1961-82	(-0.25)	(1.08)	(-0.82)	(4.97)	0.355	2.76	2.21
1966-82	(-0.21)	(2.38)	(2.25)	(-1.36)	0.913	42.10	1.81
1965-75	DIMPC (1.94)	DIMPX (-1.57)	(-1.98)	(2.78)	0.525	3.32	1.23
1965-82	(1.28)	(-0.40)	(-0.40)	(14.66)	0.363	2.86	1.39
1966-82	(1.91)	(1.93)	(2.47)	(-1.65)	0.908	39.78	1.76
1961-75	DIMPDX (0.85)	DIMPDX (-0.83)	(-1.20)	(1.86)	0.440	2.36	1.61
1961-82	(0.17)	(0.76)	(-0.30)	(2.83)	0.363	2.84	2.26
1966-82	(0.21)	(2.38)	(-2.25)	(-1.36)	0.913	42.10	1.81
1961-75	DIMPE (0.85)	DIMPX (-0.63)	(-1.20)	(1.86)	0.440	12.36	1.61
1961-82	(0.36)	(0.85)	(-0.47)	(2.83)	0.494	4.89	2.35
1966-82	(2.05)	(2.27)	(1.41)	(-3.69)	0.972	142.80	1.82
1961-75	DIMPFX (0.78)	DIMPFX (-0.40)	(-0.44)	(1.10)	0.447	2.74	1.73
1961-82	(1.69)	(0.29)	(-0.38)	(12.93)	0.358	2.78	1.86
1966-82	(2.89)	(0.64)	(0.05)	(-3.55)	0.972	141.03	2.04
1961-75	DIMPX (0.79)	DIMPX (-0.60)	(-1.61)	(1.99)	0.43	2.27	1.54
1961-82	(0.43)	(0.13)	(-1.58)	(12.93)	0.358	2.78	1.86
1966-82	(-1.47)	(2.72)	(1.88)	(-0.24)	0.797	15.78	1.90

NOTES: Regressions made using Cochrane-Orcutt iterative estimation procedure to correct for serial correlation. Defense share computed as the proportion of the government budget excluding debt service payments. Political modification variables formed by multiplying the respective political variables by the level of central government revenues in constant (1980) prices.

CONCLUSIONS

The empirical results presented above yield considerable support to the general thesis that regime type in Argentina has a major impact on the amount and share of resources devoted to defense. Military regimes consistently outspent their civilian counterparts on defense, and increased the share of defense in the Central Government budget.

With respect to the O'Donnell thesis, the results lend strong support to the theory that the degree of threat preceding the assumption of power by a military regime influences its overall defense expenditures; all authoritarian regimes are not alike in the priority they place on defense (as evidenced by the second military regime's outspending of the first military regime on defense).

The results do not, however, give a sharp delineation between the first civilian and first military regimes with respect to their budgetary priorities for defense.

REFERENCES

- [1] The time period selected was based on data availability. The longest consistent series on Argentinean budgetary allocations has been recently compiled by the World Bank for this period. Cf. The World Bank, Argentina: Economic Memorandum, Volume 2: Statistical Appendix (Washington: IBRD, 1985), pp. 334-335.
- [2] G. O'Donnell Modernization and Bureaucratic-Authoritarianism: Studies in South American Politics Politics of Modernization Series No. 9 (Berkeley, Calif.: Institute of International Studies, University of California Press, 1973). A useful critique of O'Donnell's approach is given in K. Remmer and G. Merkw, "Bureaucratic Authoritarianism Revisited," Latin American Research Review xvii (1982), p. 3-40. See also G. O'Donnell, "Reply to Remmer and Merkw" Latin American Research Review xvii (1982), pp. 41-50.

- [3] David Collier, "Overview of the Bureaucratic-Authoritarian Model," in D. Collier, ed., The New Authoritarianism Latin America (Princeton, N.J.: Princeton University Press, 1979), pp. 19-32. See also G. O'Donnell, "Introduction to the Latin American Cases," in G.O'Donnell, P. Schmitter and L. Whitehead, eds, Transitions from Authoritarian Rule: Prospects for Democracy (Baltimore: The Johns Hopkins University Press, 1986), part II, pp. 3-18.
- [4] G. O'Donnell "Reflections of the Patterns of Change in the Bureaucratic-Authoritarian State," Latin American Research Review xiii (1978), pp. 3-38.
- [5] Based on the survey by B. Most in "Authoritarianism and Growth of the State in Latin America: An Assessment of Their Impacts on Argentine Public Policy, 1930-70," Comparative Political Studies 13 (July 1980), pp. 175-76.
- [6] Remmer and Merkw, op. cit., p. 8.
- [7] See Gordon Richards, "The Rise and Decline of Military Authoritarianism in Latin America: The Rise of Stabilization Policy," SIAS Review 5 (Summer-Fall 1985), pp. 155-172.
- [8] Ibid.
- [9] Gordon Richards, op. cit., p. 159.
- [10] Cf. the special November 1983 issue of The Journal of Inter-American Studies 25 devoted to economic experiments in the Southern Cone and, in particular M. Blejer, "Liberalization Policies in Southern Cone Countries," pp. 431-444 in that issue.
- [11] T. Diskson, "An Economic Output and Impact Analysis of Civilian and Military Regimes in Latin South America," Development and Change 8 (1977), pp. 325-345.
- [12] Most, op. cit., pp. 192-193.
- [13] For example, R.D. McKinlay and A.S. Cohan, "Performance and Instability in Military and Non-Military Regime Systems," American Political Science Review 70 (September 1976), pp. 850-864.
- [14] P. Schmitter, "Corporatism and Public Policy in Authoritarian Portugal," Sage Professional Paper in Contemporary Sociology (Beverly Hills, California: Sage Publications, 1975), p. 37.
- [15] R. Jackman, "Politicians in Uniform: Military Governments and Social Change in the Third World," American Political Science Review 70 (December 1976), pp. 1078-97.

- [16] Ibid., p. 1096.
- [17] R.D. McKinlay and A.S. Cohan, "A Comparative Analysis of the Political and Economic Performance of Military and Civilian Regimes," Comparative Politics 8 (October 1975), pp. 1-30; and McKinlay and Cohan, "Performance and Instability," op. cit.
- [18] P. Schmitter, "Military Intervention, Political Competitiveness and Public Policy in Latin America, 1950-67," in M. Janowitz and J. Van Doorn, eds., op. cit., pp. 425-506.
- [19] M. Hayes, "Policy Consequences of Military Participation in Politics, An Analysis of Tradeoffs in Brazilian Federal Expenditures," in Craig Liske, et. al, op. cit., p. 175.
- [20] B. Ames and E. Goff, "Education and Defense Expenditures in Latin America, 1948-68," in C. Liske, op. cit., p. 175.
- [21] K. Remmer, "Evaluating the Policy Impact of Military Regimes in Latin America," Latin American Research Review xiii (1978), p. 111.
- [22] Ibid.
- [23] Remmer, op. cit., p. 47.
- [24] The level of nominal military expenditure is taken from Stockholm International Peace Research Institute, World Armaments and Disarmament, SIPRI Yearbook, various issues. This military expenditure series was deflated by the consumer price index (1974=100) taken from the World Bank, Argentina Economic Memorandum, Volume 2, Statistical Appendix (Washington: The World Bank, 1985), p. 398. The budgetary share of military expenditures was taken from the World Bank, op. cit., p. 175.
- [25] The dates represent the years in which each respective regime was in power throughout most of the year.
- [26] Regressions were preformed using TSP--Time Series Processor. Cf B. Hall and R. Hall, Time Series Processor, Version 3.5, User's Manual (Stanford, California: Hall and Hall: 1980) for a description of the program and generated statistics.
- [27] An interesting application of this method is given in D. Diannaros and J. Lee, "Private Savings Behavior and Estimation of Structural Change: The Case of Korea," paper presented at the twentieth Atlantic Economic Conference, Washington, D.C., September 1985.

- [28] The modification variable for each dummy was formed by multiplying the share of military expenditures in the government budget by government expenditures as a percentage of GDP. For example DUMPX now indicates whether the slope of the regression line changes with regime type as government expenditures in GDP change.